Appl. No. 10/692,525
Amdt. dated March 20, 2009
Reply to Office Action of December 22, 2008

PATENT

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1.   (Currently Amended) A method for establishing a mapping between internal metadata for a database and external metadata for a report, the method comprising:

reading the internal metadata from the database, the internal metadata including metadata that describes data stored in the database;

generating and displaying a screen, the screen including a grid having rows and columns, the rows and columns having dimensional metadata from the internal metadata placed in the grid as row and/or column headings, the grid further including the internal metadata read from the database;

receiving from a user a selection of a portion of the grid, the selection indicating one or more cells of the grid;

in response to receiving the user selection:

determining the internal metadata displayed on the grid that corresponds to the one or more cells, the internal metadata corresponding to the one or more cells forming a subset of the internal metadata displayed on the grid, wherein the user modifies the internal metadata to indicate the internal metadata is to be mapped to external metadata;

presenting to the user one or more user interface controls for receiving a definition of external metadata for the subset of the internal metadata, the definition of external metadata specifying particular associations of the subset of internal metadata with the external metadata in the report, the definition describing all data points within the user selection;

Appl. No. 10/692,525
Amdt. dated March 20, 2009
Reply to Office Action of December 22, 2008

PATENT

receiving, via the one or more user interface controls, the definition of external metadata from the user, and based on the definition of the external metadata, creating a first mapping between the selected internal metadata and the external metadata;

generating a report definition for the report, the report definition describing how report data described by the external metadata in the report is to be produced from the data stored in the database and described by the internal metadata; and

storing the report definition, the report definition including the first mapping of internal metadata to external metadata for the report,

wherein the first mapping applies only to a particular report and does not create a persistent association of the internal metadata with the external metadata such that a second report may be defined which uses a second mapping of the internal metadata to the external metadata, said second mapping being different from the first mapping, said second mapping associated with said second report.

reading, from the database, said internal metadata;

wherein said internal metadata is metadata that describes data, stored in the database;

generating and displaying a screen, wherein displaying the screen includes displaying the internal metadata, which was read from the database, in a grid having rows and columns wherein dimensional metadata from said internal metadata is placed in the grid as row headings and/or column headings;

receiving from a user a selection of a portion of said grid, said selection indicating one or more cells of the grid;

in response to receiving from the user said selection:

determining which internal metadata, displayed on said grid, corresponds to said one or more cells;

wherein the internal metadata that corresponds to the one or more cells is a subset of all internal metadata displayed in said grid; and

presenting to the user one or more user interface controls for receiving, from said user, a definition of external metadata in said report;

Appl. No. 10/692,525
Amdt. dated March 20, 2009
Reply to Office Action of December 22, 2008

PATENT

~~wherein the external metadata is metadata that describes report data for~~
~~said report;~~

~~wherein the definition of external metadata is for only said subset of~~
~~internal metadata that corresponds to cells that were selected by said selection;~~

~~wherein the definition of external metadata specifies particular external~~
~~metadata in said report to associate with said subset of internal metadata;~~

~~wherein the definition of external metadata describes all data points within~~
~~said selection;~~

~~receiving, via the one or more user-interface controls, said definition of~~
~~external metadata from said user; based on the definition of external metadata, creating a~~
~~mapping between said selected internal metadata and the particular external metadata;~~
~~specified by the definition of external metadata; and~~

~~based at least on the mapping, generating a report definition for said~~
~~report, wherein said report definition describes how the report data described by the~~
~~external metadata in said report is to be produced from the data stored in the database and~~
~~described by said internal metadata.~~

2.   (canceled)

3.   (Original) The method of claim 1, further comprising:

determining if the external metadata describing all data points within said
selection is predefined; and

wherein if the external metadata describing all data points within said selection is
predefined, said receiving from said user a definition of external metadata comprises:

presenting said user a list from which they may select an item of
predefined metadata; and

receiving from said user a selection of an item of predefined metadata
from said list.

Appl. No. 10/692,525
Amdt. dated March 20, 2009
Reply to Office Action of December 22, 2008

PATENT

4.   (Original) The method of claim 3, wherein said list is provided in a tree control.

5.   (Original) The method of claim 3, further comprising:

determining if syntax of the external metadata describing all data points within said selection is predefined; and

wherein if the external metadata describing all data points within said selection is not predefined, but syntax of the external metadata describing all data points within said selection is predefined, said receiving from said user a definition of external metadata comprises:

presenting said user with one or more dialog boxes in which they can specify external metadata to be created; and

receiving from said user a specification of external metadata to be created.

6.   (Original) The method of claim 5, wherein said presenting includes presenting said user with a dialog box in which they can specify an entity for said external metadata to be created.

7.   (Original) The method of claim 5, wherein said presenting includes presenting said user with a dialog box in which they can specify units for said external metadata to be created.

8.   (Original) The method of claim 5, wherein said presenting includes presenting said user with a dialog box in which they can specify a time period for said external metadata to be created.

9.   (Original) The method of claim 5, wherein said presenting includes presenting said user with a dialog box in which they can specify a scenario for said external metadata to be created.

10.   (Original) The method of claim 9, wherein a control for said dialog box is a tree control when an element button is selected and a text field when a custom button is selected.

11.   (Original) The method of claim 1, wherein said selection is one or more rows in said grid.

12.   (Original) The method of claim 1, wherein said selection is one or more columns in said grid.

13.   (Previously Presented) The method of claim 1, wherein said selection is one or more individual cells in said grid, wherein said one or more individual cells do not comprise an entire row or an entire column.

14.   (Original) The method of claim 13, wherein preexisting mappings for rows or columns containing said selection are overwritten for said selected individual cells.

15.   (Original) The method of claim 1, further comprising:
receiving from said user a formula involving one or more data items in said grid;
creating a new row or column in said grid;
entering said formula into a cell in said new row or column; and
wherein said selection includes said cell.

16.   (Original) The method of claim 1, wherein said external metadata is Extensible Business Reporting Language (XBRL) metadata.

17.   (Original) The method of claim 1, wherein an external metadata source is specified using a schema manager.

18.   (Currently Amended) An apparatus for establishing a mapping between internal metadata for a database and external metadata for a report, the apparatus comprising ~~one~~

~~or more processors coupled to a memory, the apparatus further comprising~~ <u>a computer</u>
<u>configured with</u>:

        <u>means for reading the internal metadata from the database, the internal metadata</u>
<u>including metadata that describes data stored in the database;</u>

        ~~means for reading, from the database, said internal metadata;~~

        ~~wherein said internal metadata is metadata that describes data, stored in the~~
~~database;~~

        <u>an internal metadata grid organizer configured to generate and display a screen,</u>
<u>the screen including a grid having rows and columns, the rows and columns having dimensional</u>
<u>metadata from the internal metadata placed in the grid as row and/or column headings, the grid</u>
<u>further including the internal metadata read from the database;</u>

        ~~an internal metadata grid organizer;~~

        ~~wherein the internal metadata grid organizer is configured to generate and display~~
~~a screen;~~

        ~~wherein the screen, which said internal metadata grid organizer is configured to~~
~~generate, displays the internal metadata, which was read from the database, in a grid having rows~~
~~and columns, wherein dimensional metadata from said internal metadata is placed in the grid as~~
~~row headings and/or column headings;~~

        <u>a grid portion user selection receiver coupled to the internal metadata grid</u>
<u>organizer to receive from a user a selection of a portion of the grid, the selection indicating one</u>
<u>or more cells of the grid containing internal metadata to be mapped to external metadata in an</u>
<u>external system, the external metadata describing report data for the report;</u>

        ~~a grid portion user selection receiver coupled to said internal metadata grid~~
~~organizer to receive a seeded portion of a grid indicating internal metadata to be mapped to~~
~~external metadata in an external system;~~

        ~~wherein the external metadata is metadata that describes report data for said~~
~~report;~~

        ~~said grid portion user selection receiver being configured to receive from [[a]]~~ <u>the</u>
~~user a selection of a portion of said grid, said selection indicating one or more cells of the grid;~~

<u>means for determining the internal metadata displayed on the grid that</u> <u>corresponds to the one or more cells, the internal metadata corresponding to the one or more</u> <u>cells forming a subset of the internal metadata displayed on the grid, wherein the user modifies</u> <u>the internal metadata to indicate the internal metadata is to be mapped to external metadata;</u>

~~means for determining, in response to said selection, which internal metadata,~~ ~~displayed on said grid, corresponds to said one or more cells;~~

~~wherein the internal metadata that corresponds to the one or more cells is a subset~~ ~~of all internal metadata displayed in said grid;~~

<u>an external metadata user definition receiver coupled to said grid portion user</u> <u>selection receiver configured to present to the user one or more user interface controls for</u> <u>receiving a definition of external metadata for the subset of the internal metadata, the definition</u> <u>of external metadata specifying particular associations of the subset of internal metadata with the</u> <u>external metadata in the report, the definition describing all data points within the user selection,</u>

~~an external metadata user definition receiver coupled to said grid portion user~~ ~~selection receiver;~~

~~the external metadata user definition receiver being configured to, in response to~~ ~~said selection, present to the user one or more user interface controls for receiving, from said~~ ~~user, a definition of the external metadata in said report;~~

~~wherein the definition of the external metadata is for only said subset of internal~~ ~~metadata that corresponds to cells that were selected by said selection;~~

~~wherein the definition of the external metadata specifies particular external~~ ~~metadata in said report to associate with said subset of internal metadata;~~

~~wherein the definition of the external metadata describes all data points within~~ ~~said selection;~~

the external metadata user definition receiver being <u>further</u> configured to receive, via the one or more user interface controls, ~~said~~ <u>the</u> definition of the external metadata;

an internal metadata-to-defined external metadata mapping creator coupled to ~~said~~ <u>the</u> external metadata user definition receiver, ~~said~~ <u>the</u> internal metadata-to-defined external metadata mapping creator being configured to~~, based on the definition of external metadata,~~

create a <u>first</u> mapping between ~~said~~ <u>the</u> selected internal metadata and the ~~particular~~ external metadata specified by the definition of external metadata;

~~metadata;~~ and

a report definition generator configured to~~, based at least on the mapping,~~ ~~generating~~ <u>generate</u> a report definition for ~~said~~ <u>the</u> report, ~~wherein said~~ <u>the</u> report definition ~~describes~~ <u>describing</u> how the report data described by the external metadata in ~~said~~ <u>the</u> report is to be produced from the data stored in the database and described by ~~said~~ <u>the</u> internal metadata<u>,</u>

<u>wherein the first mapping is contained in the report definition and applies only to a particular report and does not create a persistent association of the internal metadata with the external metadata such that a second report may be defined which uses a second mapping of internal metadata to external metadata, said second mapping being different from the first mapping, said second mapping associated with said second report.</u>

19.   (canceled)

20.   (Original) The apparatus of claim 18, further comprising:

a predefined external metadata selection determiner coupled to said external metadata user definition receiver; and

wherein said external metadata user definition receiver includes:

a predefined metadata list presenter; and

a predefined metadata list item receiver coupled to said predefined metadata list presenter.

21.   (Original) The apparatus of claim 20, further comprising:

a predefined external metadata syntax determiner coupled to said external metadata user definition receiver; and

wherein said external metadata user definition receiver includes:

an external metadata dialog box presenter; and

an external metadata specification receiver coupled to said external metadata dialog box presenter.

22.   (Original) The apparatus of claim 18, further comprising:

a user formula receiver;

a new row or column creator coupled to said user formula receiver and to said internal metadata grid organizer;

a new row or column user formula placer coupled to said new row or column creator and to said user formula receiver.

23.   (Currently Amended) An apparatus for establishing a mapping between internal metadata for a database and external metadata for a report, the apparatus comprising ~~one or more processors coupled to a memory, the apparatus further comprising~~ a computer configured with:

means for reading the internal metadata from the database, the internal metadata including metadata that describes data stored in the database;

~~means for reading, from the, said internal metadata;~~

~~wherein said internal metadata is metadata that describes data stored in the database;~~

means for generating and displaying a screen, the screen including a grid having rows and columns, the rows and columns having dimensional metadata from the internal metadata placed in the grid as row and/or column headings, the grid further including the internal metadata read from the database;

~~means for generating and displaying a screen;~~

~~wherein the means for displaying the screen includes means for displaying the internal metadata, which was read from the database, in a grid having rows and columns, wherein dimensional metadata from said internal metadata is placed in the grid as row headings and/or column headings;~~

means for receiving from a user a selection of a portion of the grid, the selection indicating one or more cells of the grid;

~~from a user a selection of a portion of said grid, said selection indicating one or more cells of the grid;~~

means for determining the internal metadata displayed on the grid that corresponds to the one or more cells, the internal metadata corresponding to the one or more cells forming a subset of the internal metadata displayed on the grid, wherein the user modifies the internal metadata to indicate the internal metadata is to be mapped to external metadata;

~~means for determining, in response to said selection, which internal metadata, displayed on said grid, corresponds to said one or more cells;~~

~~wherein the internal metadata that corresponds to the one or more cells is a subset of all internal metadata displayed in said grid;~~

means for presenting to the user one or more user interface controls for receiving a definition of external metadata for the subset of the internal metadata, the definition of external metadata specifying particular associations of the subset of internal metadata with the external metadata in the report, the definition describing all data points within the user selection;

~~means for presenting to the user, in response to said selection, one or more user interface controls for receiving, from said user, a definition of external metadata in said report;~~

~~wherein the external metadata is metadata that describes report data for said report;~~

~~wherein the definition of external metadata is for only said subset of internal metadata that corresponds to cells that were selected by said selection;~~

~~wherein the definition of external metadata specifies particular external metadata in said report to associate with said subset of internal metadata;~~

~~wherein the definition of external metadata describes all data points within said selection;~~

means for receiving, via the one or more user interface controls, the definition of external metadata from the user, and based on the definition of the external metadata, creating a first mapping between the selected internal metadata and the external metadata;

~~means for receiving, via the one or more user interface controls, said definition of external metadata from said user;~~

~~means for based on the definition of external metadata, creating a mapping between said selected internal metadata and the particular external metadata specified by the definition of external metadata; and~~

means for generating a report definition for the report, the report definition describing how report data described by the external metadata in the report is to be produced from the data stored in the database and described by the internal metadata; and

~~based at least on the mapping, generating a report definition for said report, wherein said report definition describes how the report data described by the external metadata in said report is to be produced from the data stored in the database and described by said internal metadata;~~

means for storing said report definition, the report definition containing the mapping of internal metadata to external metadata for the report,

wherein the mapping applies only to a particular report and does not create a persistent association of the internal metadata with the external metadata such that a second report may be defined which uses a second mapping of internal metadata to external metadata, said second mapping being different from the mapping, said second mapping associated with said second report.

24.   (canceled)

25.   (Original) The apparatus of claim 23, further comprising:

means for determining if the external metadata describing all data points within said selection is predefined; and

wherein if the external metadata describing all data points within said selection is predefined, said means for receiving from said user a definition of external metadata comprises:

means for presenting said user a list from which they may select an item of predefined metadata; and

means for receiving from said user a selection of an item of predefined metadata from said list.

26.   (Original) The apparatus of claim 25, wherein said list is provided in a tree control.

27.   (Original) The apparatus of claim 25, further comprising:

means for determining if syntax of the external metadata describing all data points within said selection is predefined; and

wherein if the external metadata describing all data points within said selection is not predefined, but syntax of the external metadata describing all data points within said selection is predefined, said means for receiving from said user a definition of external metadata comprises:

means for presenting said user with one or more dialog boxes in which they can specify external metadata to be created; and

means for receiving from said user a specification of external metadata to be created.

28.   (Original) The apparatus of claim 27, wherein said means for presenting includes means for presenting said user with a dialog box in which they can specify an entity for said external metadata to be created.

29.   (Original) The apparatus of claim 27, wherein said means for presenting includes means for presenting said user with a dialog box in which they can specify units for said external metadata to be created.

30.   (Original) The apparatus of claim 27, wherein said means for presenting includes means for presenting said user with a dialog box in which they can specify a time period for said external metadata to be created.

31.   (Original) The apparatus of claim 27, wherein said means for presenting includes means for presenting said user with a dialog box in which they can specify a scenario for said external metadata to be created.

Appl. No. 10/692,525
Amdt. dated March 20, 2009
Reply to Office Action of December 22, 2008

PATENT

32. (Original) The apparatus of claim 31, wherein a control for said dialog box is a tree control when an element button is selected and a text field when a custom button is selected.

33. (Original) The apparatus of claim 23, wherein said selection is one or more rows in said grid.

34. (Original) The apparatus of claim 23, wherein said selection is one or more columns in said grid.

35. (Original) The apparatus of claim 23, wherein said selection is one or more individual cells in said grid.

36. (Original) The apparatus of claim 35, wherein preexisting mappings for rows or columns containing said selection are overwritten for said selected individual cells.

37. (Original) The apparatus of claim 23, further comprising:

means for receiving from said user a formula involving one or more data items in said grid;

means for creating a new row or column in said grid;

means for entering said formula into a cell in said new row or column; and wherein said selection includes said cell.

38. (Original) The apparatus of claim 23, wherein said external metadata is Extensible Business Reporting Language (XBRL) metadata.

39. (Original) The apparatus of claim 23, wherein an external metadata source is specified using a schema manager.

Appl. No. 10/692,525
Amdt. dated March 20, 2009
Reply to Office Action of December 22, 2008

PATENT

40.   (Previously Presented) The method of Claim 1 wherein:

the internal metadata describes data, contained in the database, from which a report is to be generated; and

the screen includes tools for designing the report.

41.   (Previously Presented) The apparatus of Claim 18 wherein:

the internal metadata describes data, contained in the database, from which a report is to be generated; and

the screen includes tools for designing the report.

42.   (Previously Presented) The apparatus of Claim 23 wherein:

the internal metadata describes data, contained in the database, from which a report is to be generated; and

the screen includes tools for designing the report.